ABSTRACT OF THE DISCLOSURE

Embodiments of the present invention provide for platform independence, low intrusiveness, and optimal memory usage of the binary instrumentation process by means of employing one procedure (interceptor function) implemented in a high-level programming language to intercept an arbitrary number of functions or blocks of code. Each time a function or code block needs to be intercepted a new copy of the procedure from a provided memory region may be associated with the address of the function or block of code by means of a memory region descriptor and an intercepted function address table. Once activated, the interceptor function may retrieve its current address and, by searching memory region descriptors, determine the region the current address belongs to; the region's base address may then be obtained. A reference to the intercepted function address table may be fetched from the region descriptor; and an index to the intercepted function address table may be computed. Finally, the address of an intercepted function corresponding to the active copy of the interceptor function may be read from the intercepted function address table.